Overview of TA-55
Criticality Safety Program

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Summary of the Recent Nuclear Criticality Safety Audit of Solution Operations at TA-55

- Good Practices
  - —Technician involvement in the NCS program
    - Technicians participate in how controls are developed and applied
    - Understand the requirements of the Criticality Safety Limit Approvals (CSLA)
  - —ESH-6 (Criticality Safety Group) interaction with staff on the process floor
    - Frequently walk the spaces with NMT staff and techs and have a good rapport
    - Strong technical background with criticality safety

Summary of the Recent Nuclear Criticality Safety Audit of Solution Operations at TA-55

- Areas for improvement
  - —Improve the formality in documenting the safety basis for CSLA s, training, and implementation of criticality safety controls
  - —Revise the NMT nuclear criticality safety procedure to include restrictions on open unattended unfavorable containers (such as plastic bags)

NMT Division Nuclear Criticality Safety
NMT-AP-522, R0

- Defines roles and responsibilities for all individuals involved with managing or handling fissile materials (for example)
  - ESH-6 personnel
  - Criticality Safety Officers (CSO)
  - Group Leader
  - Fissile Material Handler
- Defines the procedures for developing and applying criticality safety limits in all aspects of fissile material handling
  - Criticality tag boards
  - Postings
  - Transfers and storage
- Defines the response to a criticality limit violation

Define the Work

- Prepare the Hazard Control Plan/Work Instruction
  - —Contains the procedural steps
  - —Lists equipment
  - —Defines other hazards that can impact criticality safety
- For new processes or modifications, a Criticality Safety Limit Approval form is also completed

Analyze the Hazards

- The group Criticality Safety Officer (CSO) prepares the CSLA with the HCP/WI which provide the basis for analyzing the criticality safety hazard
  - ESH-6 walks down the area where the work is planned and discusses the work with the staff and technicians
  - ESH-6 analyzes the proposed limits and recommends revisions or accepts the limits
  - CSLA is also reviewed by the Authorization Basis group
- ESH-6 also reviews hardware or equipment modifications
  - CSLA is prepared to provide review basis and document the change

Control the Hazards

- Once the CSLA is approved by the operating group leader, criticality limit signs are posted and also incorporated into the HCP/WI
  - —All users of the HCP/WI are trained and qualified
  - —The documents are sent to ESH-6 and maintained in the operating group s records
- Hardware modifications that impact criticality safety are reviewed by ESH-6

Perform the Work

- How to respond to a criticality limit violation
  - Stop work as soon as safely possible
  - Step away from the area
  - Control access to the area
  - Notify the appropriate resources
- Recovery
  - Investigation committee is formed
  - Plans and directs recover operations
  - Report and lessons learned

Ensure Performance

- Annual training on nuclear criticality safety
  - —Class based
  - —Performance based
- Management Walkaround system
  - —Guidance Card, Criticality Safety in Processes and Operations with Fissile Materials
  - —Guidance Card, Criticality Safety for Handling and Storage of Fissile Materials
- Audits